

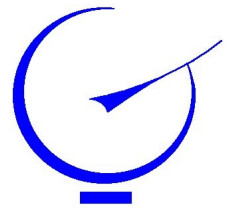


GLOBAL
TECHNOLOGY
MANAGEMENT, INC.

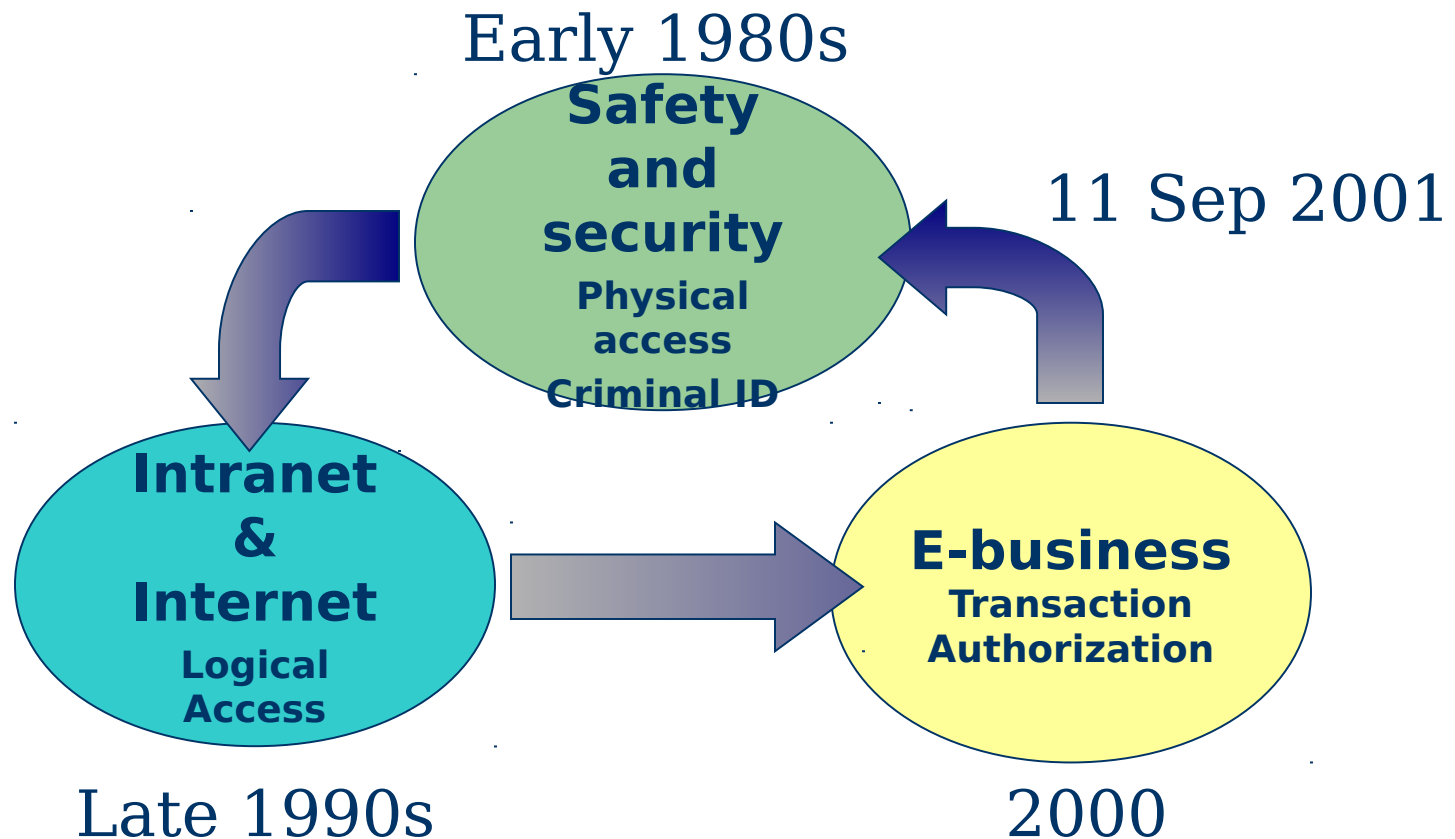
Government Applications of Biometric Technologies

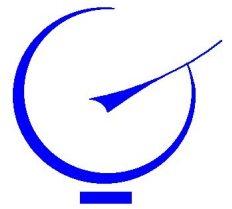
Border & Aviation Security

19 June 2003



Evolution of Biometric Market





Drivers: 2003

- **Legislative requirements**

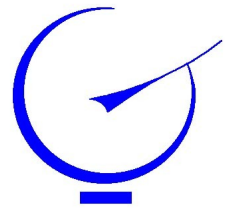
- Visa & passport reform: biometrics on all travel documents
- Transportation security: worker & traveler identification
- Health, Finance & “E-Sign”

- **Programmatic initiatives**

- DoD Common Access Card, GSA Smart Card
- DHS US-VISIT: +US\$1 billion infrastructure project
- TSA airport trials, transport worker identification card

- **Awareness & Interest**

- General understanding of “fit” for biometrics in security
- Privacy in perspective



Removing the Last Barriers

- **Standardization**

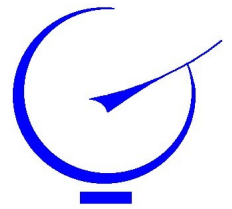
- National Institute of Standards & Technology & M-1 Committee
- ICAO
- IATA Simplifying Passenger Travel Interest Group

- **R&D, Large Scale Deployment**

- National Biometric Security Project (NBSP)
- Center for Information Technology Research (Consortium of Universities and Companies)

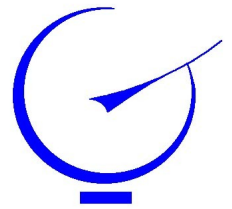
- **Government Policy**

- Defining uses and resolving conflicts: 1:n or 1:1?



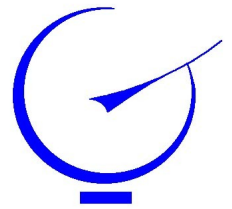
Biometrics & Border Control

- November 2002 Report by U.S. General Accounting Office (GAO)
- Examined uses for biometrics in two areas:
 - Document issuance (passport and visa)
 - Multiple identities
 - Criminal record
 - Border clearance
 - Linking bearer to issued document
 - Expediting clearance

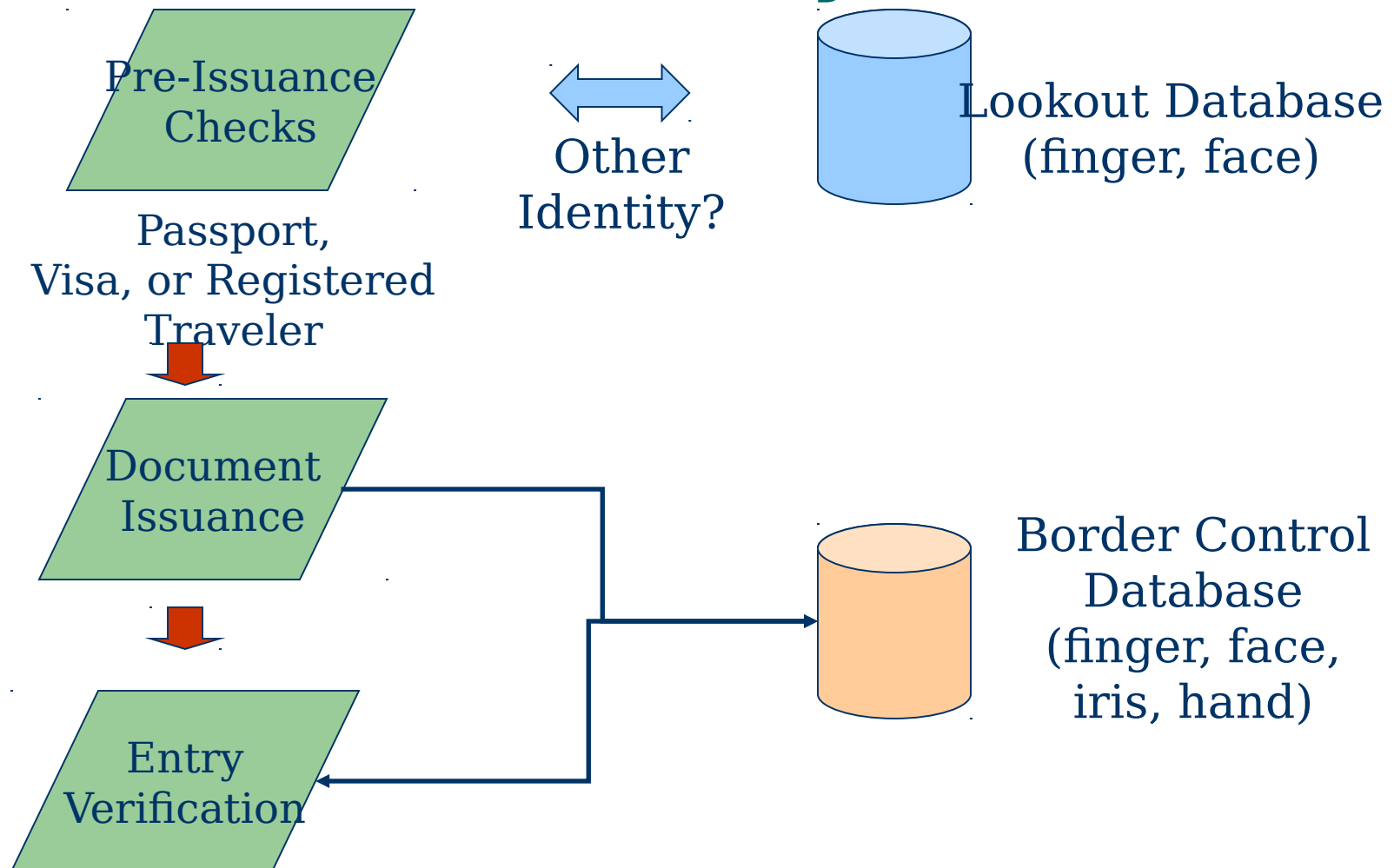


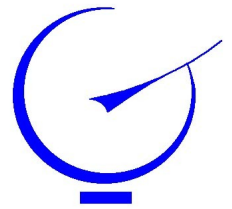
GAO Findings

- **Biometrics is a proven technology for border control**
 - e.g., INSPASS
- **Four technologies found useful:**
 - finger imaging 1:n criminal checks
 - face recognition 1:n lookout checks
 - hand geometry registered travelers
 - iris recognition registered travelers
- **Security is maintained if information is stored in a database**



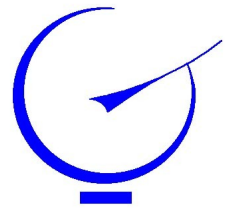
Border Control System





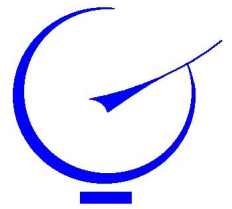
Practical Applications

- **US-VISIT Entry-Exit System (2003-)**
 - All visas
 - Future U.S. passports
 - All visa waiver travelers
- **Canada-U.S. “Smart Border” Initiative**
 - SENTRI, NEXUS, CANPASS-Air
- **Registered Traveler**
 - United Airlines & Transportation Security Administration (TSA) trial



United Airlines-TSA Trial

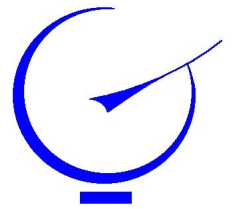
- **Current Situation at Airports**
 - Staffing and facility limitations = long lines for customers
 - Automated processes are used for a very small percentage of passengers
 - Baggage retrieval for international flights is cumbersome, requires lots of space, and slows down flight connections



USACCESS:

United Airlines-TSA Trial

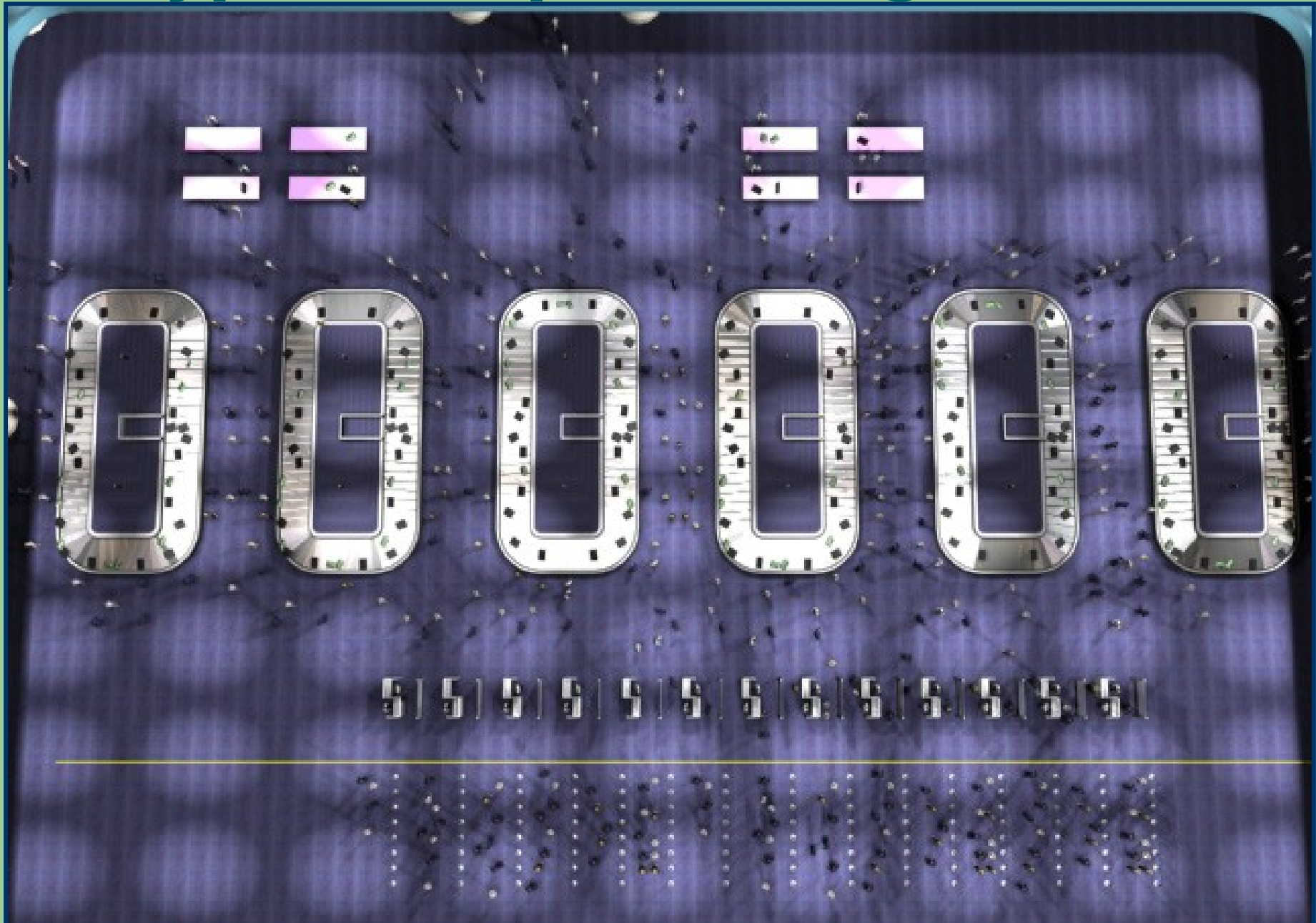
- USACCESS: U.S. Automated Check-in, Clearance and Entry Support System
- Biometric-based check-in and border clearance
- New systems architecture concept for interface with government systems
- Avoid problems of earlier programs
 - Simplify enrollment
 - Make it available to a large group of travelers
 - Make it easy to use!



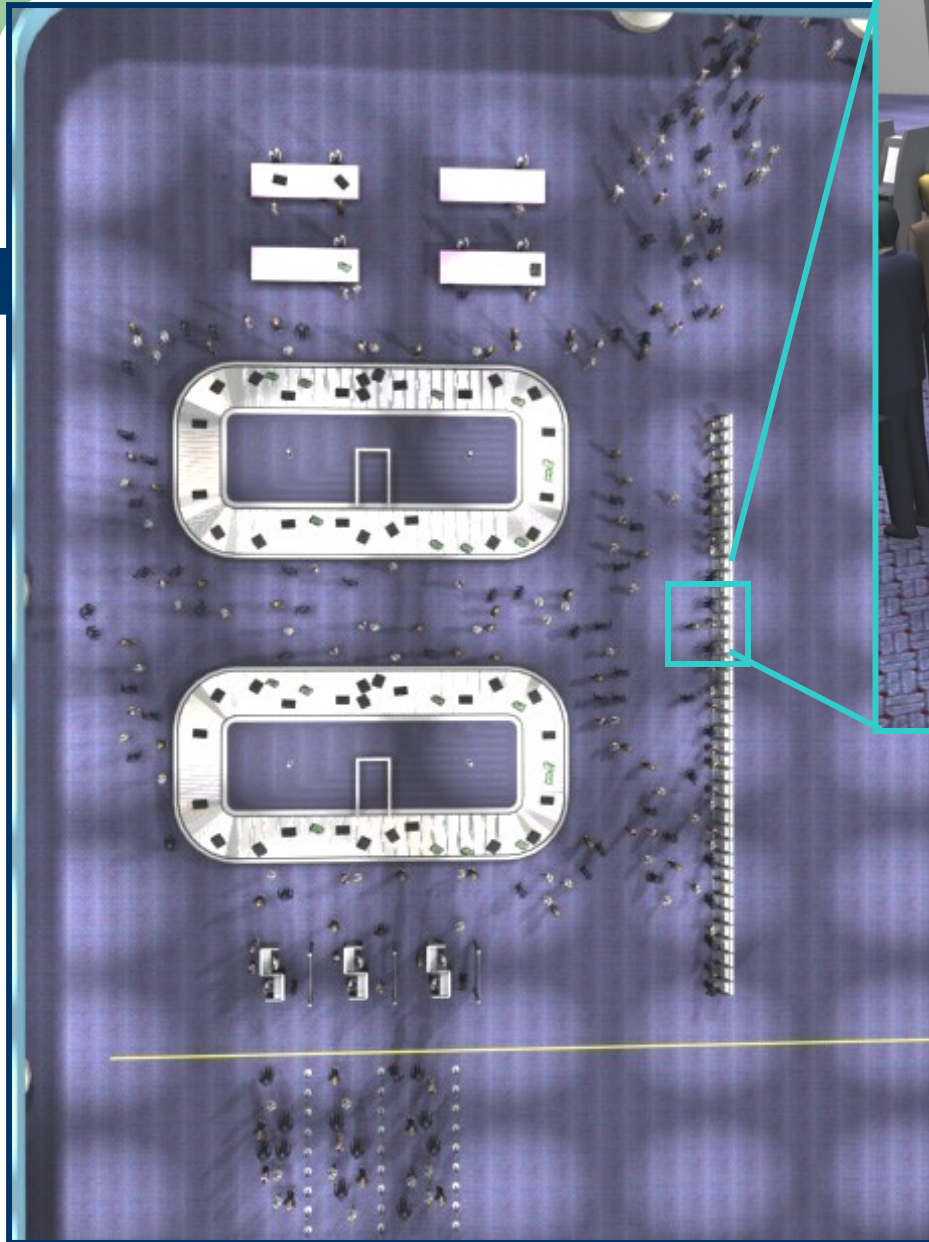
USACCESS Goals

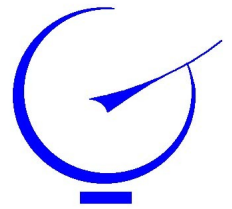
- Passenger expedited clearance for Immigration, Customs and Agriculture
- Better targeting for security checks
- More efficient airport facilities
- Effective use of Immigration resources
- Automation of current manual tasks

Typical Airport Design



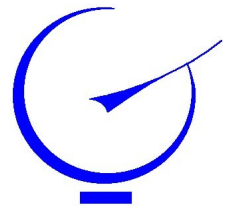
Future Airport Design





Air Carrier Pre-Enrollment

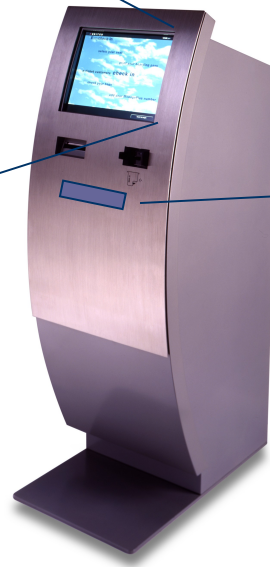
- Scan passport
- Confirm document against State Department information
- Capture biometric data (finger image, face)
- Provide official application
- Instruct traveler on use of new process



Step 1: Activating Record

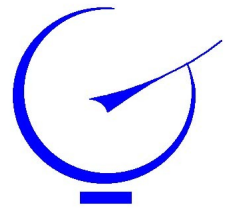
 **UNITED**

**Please place
passport face
down on the
device below**



Passport scan

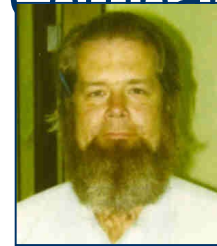




Step 2: Verifying Identity



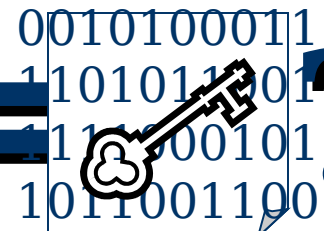
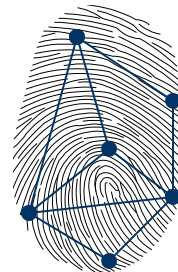
Face Recognition
Comparison



Captured

Stored

Finger Image Comparison

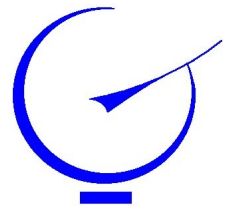




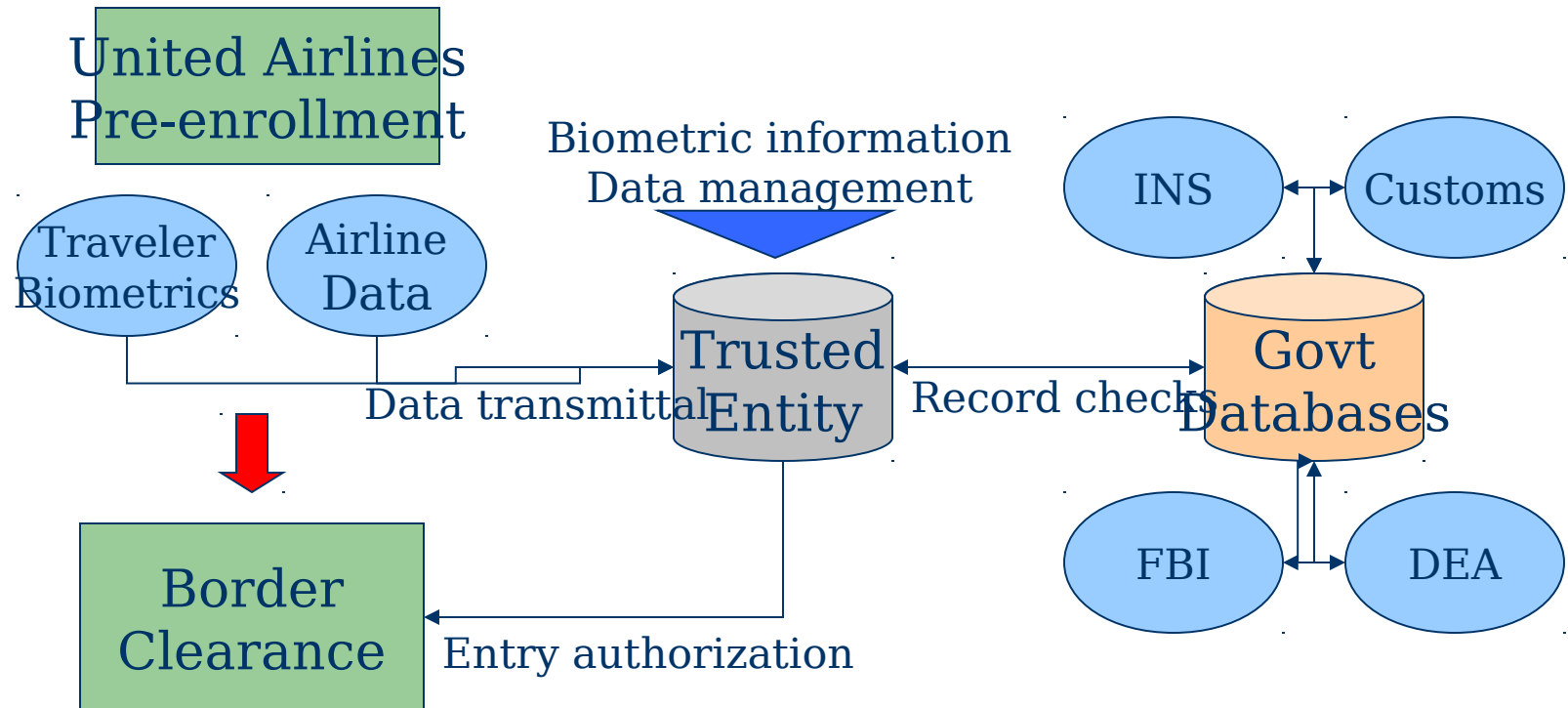
Step 3: Customs Declaration Form

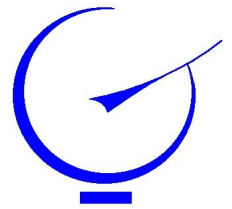
- Electronic declaration

A rounded rectangular box with a light blue background featuring a cloudy sky pattern. At the top left is the United logo (three slanted stripes) followed by the word "UNITED" in bold black capital letters. Below this, the following flight details are listed in a dark blue, sans-serif font:
Name: JOHN MICHAEL SMITH
Address: 123 MAIN ST
Passport #: 12345678
Nationality: USA
From: FRANKFURT, GERMANY
To: WASHINGTON DC, USA
Flight #: UA945
A horizontal line separates the flight details from the question below.
1.) **Have you been on a farm?**
At the bottom, there are two light blue buttons with rounded corners. The left button contains the word "YES" in bold black capital letters, and the right button contains the word "NO" in bold black capital letters.

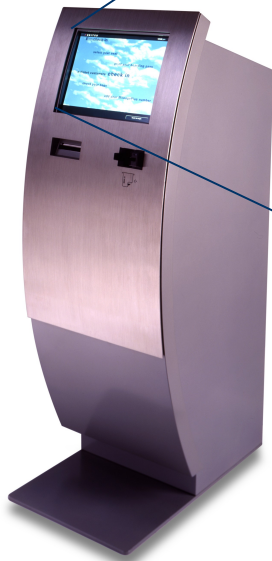


Step 4: Data Transfer





Step 5: Arrival Process

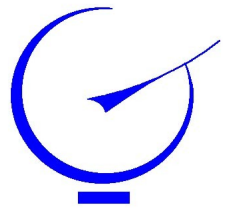


Your bags have been sent to your connecting flight. Please proceed to the gate.

OR

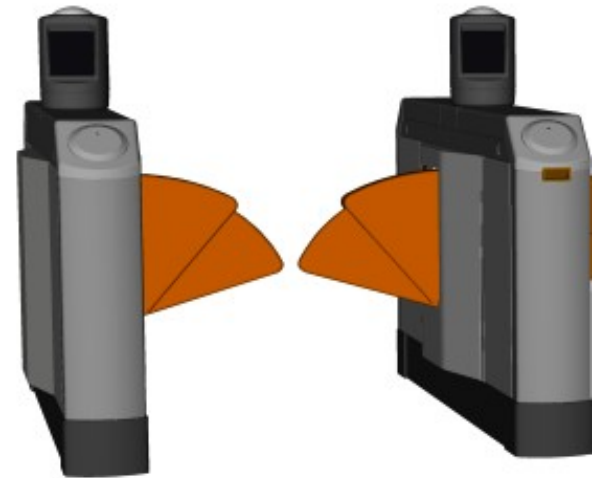
Please claim your bags and proceed to Customs for secondary screening.

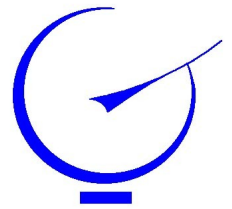
- Passport scan
- Face & finger biometric checks
- Print card showing passenger's status



Step 6: Exit Control

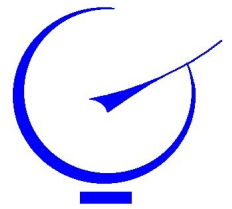
- Cleared passengers exit through access control gates
- Passengers not cleared to go must use manual lines





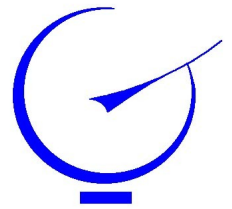
USAccess Benefits

- **For passengers**
 - Faster processing times
 - Less chance of random checks
- **For government agencies**
 - Improved security (targeting resources at problems)
 - Improved productivity (de-peaking workload)
 - Reduced demand for more real estate
- **For the industry**
 - More efficient use of facilities
 - Better allocation of staff



Next Steps for USAccess

- Implement pilot project, September 2003
 - Washington Dulles (IAD)
 - Outbound check-in and arrival clearance
 - London Heathrow (LHR)
 - Inbound check-in for selected Dulles flights
 - Evaluate potential uses for domestic traffic
 - Expand as warranted within air transport system



For Additional Information

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